

Amendments to the Specification:

Please replace paragraph [0002] with the following amended paragraph:

The term radiosurgery refers to a procedure in which intense and precisely ~~focused~~ directed doses of radiation are delivered to a target region in a patient, in order to destroy tumorous cells or otherwise treat the target region. The term radiotherapy refers to a procedure in which radiation is applied to a target region for therapeutic, rather than necrotic, purposes. The amount of radiation utilized in radiotherapy is typically about an order of magnitude smaller, as compared to the amount used in radiosurgery. Radiotherapy is frequently used to treat early stage, curable cancers. For convenience, the term "radiosurgery" in this application shall henceforth mean "radiosurgery and/or radiotherapy."

Please replace paragraph [0020] with the following amended paragraph:

One or more table position sensors 150 are provided to sense the position of the table 110. One or more table motion actuators 160 are provided for moving the table, in accordance with directions from the controller 130. A table interface module 120 allows the table to interface with the sensors 150, the actuators 160, the controller 130, and the user interface 140. In the illustrated embodiment, the table interface module 120 is an electronics module embedded within the table. The table interface module 120 manages communications between the table ~~100~~ 110, and the user interface 140 and the controller 130, accepting motion commands and providing position feedback and other status messages. The electronics module 120 can independently check table positions against a model of surrounding obstructions to ensure that the table doesn't collide with any obstacles during table motion. The module 120 could be a retrofit item or be a functionality designed as part of the table's original design requirements.

Please replace paragraph [0024] with the following amended paragraph:

The controller 130 includes an input module 231 for receiving 1) pre-treatment scan data representative of pre-treatment scans of the target, and 2) near real time image data representative of near real time images of the target. The pre-treatment scans show the position and orientation of the target with respect to the pre-treatment coordinate system. The near real-time images, taken by the imaging system under the command of the controller, show the position and orientation of the target with respect to the treatment coordinate system. The treatment coordinate system and the pre-treatment coordinate systems are related by known transformation parameters. The controller includes a TLS (target location system) processing unit that computes the position and orientation of the target in the treatment coordinate system, using the pre-treatment scan data, the near real time image data, and the transformation parameters between the pre-treatment coordinate system and the treatment coordinate system.

Please replace paragraph [0025] with the following amended paragraph:

The controller 130 includes a comparator 232 , or other software for comparing the position and orientation of the target, as shown in the near real-time image data, with the position and orientation of the target as shown in the pre-treatment scan data. The controller computes the amount of translations (in three degrees of freedom) and rotations (in three degrees of freedom) that are required in order for the position and orientation of the target, as shown in the near real time images, to substantially match the position and orientation of the target, as shown in the pre-treatment scans. The controller 130 includes software for converting this information into one or more units of motion of the table, in at least three degrees of freedom, and preferably in five or six degrees of freedom. The controller 130 includes a signal generator 233, or other software for generating at least one motion command signal for implementing corrective motions of the table, which align the treatment target within the patient with respect to the radiosurgery system in such a way that the position and orientation of the target, as shown in the near real time images generated by the imaging system, substantially match the position and orientation of the target as shown in the pre-treatment scans.